

Staff Summary
Method 2A Application
Valero Renewable Fuels Company,
LLC dba Valero Albert City Plant, Corn Ethanol
(Pathway Codes: ETHC104 and ETHC105)

Deemed Complete Date: August 05, 2015

Posted for Comment Date: Aug 07, 2015

Certified Date: August 18, 2015

Plant Summary

Valero Renewable Fuels Company, LLC produces ethanol from corn at one of its dry mill facilities located in Albert City, Iowa ("Albert City"). The plant currently produces about 130 million gallons of undenatured corn ethanol per year. This plant simultaneously produces a combination of modified distiller's grains with solubles (MDGS), and dried distiller's grains with solubles (DDGS). The Albert City plant also produces corn oil as a livestock feed supplement, and the amount produced is small and considered negligible by the applicant. The Carbon Intensity (CI) values of both pathways, however, reflect plant-specific energy used for drying all levels of DGS from June 2012 to May 2014 period. The GHG emissions associated with the electricity used at the plant are estimated using the Midwest grid electricity energy mix from CA-GREET 1.8b. Ethanol from the Albert City plant is shipped by rail to California.

Carbon Intensity of Ethanol Produced

As shown in the table below, the applicant is applying for two pathway CIs. The drying energy from meters are daily recorded. As long as these energy consumptions and CI values are not exceeded, they may be used to report transactions involving volumes from Albert City, regardless of the proportions of MDGS and DDGS being produced. Proposed Method 2A pathways must be evaluated against reference pathways from the LCFS Lookup table. Although a Method 2A pathway must be very similar to its reference pathway, it must achieve at least a five gram CO₂e/MJ CI improvement over the reference pathway.¹ The reference pathway for Albert City's proposed Method 2A pathway is the Midwest dry mill, dry DGS, natural gas pathway (ETHC004) with a CI value of 98.4 gCO₂e/MJ. There is no ARB reference pathway that applies to MDGS

¹ In the LCFS regulation, this 5 gCO₂e/MJ threshold is referred to as the "substantiality requirement."

pathway. The Albert City Ethanol pathway improves upon its reference pathway CI by more than the requisite five grams of CO₂e/MJ for the DDGS pathway.

Proposed Lookup Table Entries

Fuel	Pathway Identifier	Pathway Description	Carbon Intensity Values (gCO ₂ e/MJ)		
			Direct Emission	Land Use	Total
Ethanol from Corn	ETHC104	2A Application*: Midwest; Dry Mill; Dry DGS; NG	59.14	30	89.14
Ethanol from Corn	ETHC105	2A Application*: Midwest; Dry Mill; Modified DGS; NG	54.05	30	84.05

* Specific Conditions Apply

Operating Conditions

Operations at the plant will be subject to the following conditions designed to ensure that the CI of the Albert City Ethanol pathway will remain at or below the values appearing in the table above. These conditions must be met for every gallon sold in California:

1. No conditions are placed on the amounts of electricity and natural gas consumed and the ethanol yield at Albert City, so long as the CIs reported in the above table are not exceeded. For purposes of determining compliance with this operating condition, the plant's CI will be calculated based on data from the most recent 12 months of operation, excluding periods of abnormal operations, such as planned maintenance or unpredictable, unavoidable, and uncontrollable force majeure events. The plant's thermal and electrical energy use, and ethanol yield values are classified by the applicant as confidential business information.
2. As long as both pathway CIs (89.14 and 84.05 gCO₂e/MJ) are not exceeded, fuel pathway codes (FPCs) ETHC104 and ETHC105 may be used to report transactions involving volumes from Albert City Ethanol, regardless of the proportions of DDGS, and MDGS the plant produces.

Staff Analysis and Recommendations

Staff has reviewed the Albert City Ethanol Method 2A application and finds the following:

- Staff has replicated, using the CA-GREET1.8b spreadsheet, the carbon intensity values calculated by the applicant;
- Staff has concluded that the plant's actual energy consumption is not likely to exceed the energy consumption level specified in Albert City Ethanol's Method 2A application; and
- Staff has concluded that Albert City Ethanol is capable of operating the plant in a manner such that the ethanol yields are equal to or greater than the corresponding values specified in Albert City Ethanol's Method 2A application, and that compliance with the operating conditions above can be maintained.

On the basis of these findings, staff recommends that Albert City Ethanol application for a Method 2A pathways be certified.